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| APPLICATION NO.                                                                                          | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/758,798                                                                                               | 01/11/2001  | Robert C. Frisch     | 0102323-00062       | 9352             |
| 21125                                                                                                    | 7590        | 06/23/2005           | EXAMINER            |                  |
| NUTTER MCCLENNEN & FISH LLP<br>WORLD TRADE CENTER WEST<br>155 SEAPORT BOULEVARD<br>BOSTON, MA 02210-2604 |             |                      | NGUYEN, BRIAN D     |                  |
|                                                                                                          |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                                                                          |             |                      | 2661                |                  |

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/758,798             | FRISCH ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Brian D. Nguyen        | 2661                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 02 May 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4-11 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,4-11 and 13-17 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                             |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|                                                                                                                        | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10, line 3, “said error code” is unclear if the applicant is referring to “an error code” included in the data portion described in line 3 or “an error code” included in an initial portion described in line 4 of claim 7.

Claim 13, lines 8-9 seems to mean that each of the message packets comprising a first size including an initial number of bytes and a second size including a further number of bytes. If this is true, it is suggested to change “of a first size including an initial number of bytes, and of a second size including a further number of bytes” with --, wherein each message packet comprising a first size including an initial number of bytes and a second size including a further number of bytes--. In line 14, it is suggested to replace “a further number of bytes” with --the further number of bytes--.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-11, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia (6,545,981) in view of Parkerson (5,592,536) and Saunders (6,674,735).

Regarding claims 1 and 16, Garcia discloses digital data system comprising a link that carries message packets, a first node sending a plurality of message packets to a second node on the link as a sequence of message packets, with each message packet being sent from the first node with a sequence identifier (sequence number), and each message packet comprising an error code (CRC code), the second node (i) inspecting the error code for each packet received on the link to detect an error condition, and (ii) returning a control symbol along with the sequence identifier of the received packet to the first node based on the result of that inspection (see figures 4 & 8; col. 2, lines 15-24; col. 7, lines 30-32); and the first node responding to the control symbol to control the further transmission of message packets to the second node over the link (see col. 2, line 15-24). Garcia does not specifically disclose the error code is included in the initial portion (header portion) of the packet and the second node returning the control symbol to the first node before the entire message packet has arrived at the second node. However, to include error code in the header and/or tail of a packet is well known in the art and is a matter of choice. Saunders discloses error codes (CRC) are included in the front and back of the packet (see figure 10) and Parkerson discloses the second node returning the control symbol (answer packet) to the first node before the entire message packet has arrived at the second node (see col. 10, lines 45-50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the error code in the initial portion as taught by Saunders and returning the control symbol to the first node before the entire message packet has

arrived at the second node as taught by Parkerson in the system of Garcia in order to enable the data integrity of the packet to be checked at the end node and to reduce the delay in sending the control symbol to the first node.

Regarding claim 4, Garcia discloses the second node returns a packet not-accepted control symbol to the first node indicating receipt on the link of a message packet that is out of sequence (see col. 7, lines 19-32).

Regarding claim 5, Garcia discloses the first node responds to a packet-not-accepted control symbol by re-sending a portion of the sequence of message packets (see col. 2, lines 15-17).

Regarding claim 6, Garcia discloses the first node queries the second node for an identifier of a message packet in the sequence with which to begin re-sending (see col. 2, lines 15-24).

Regarding claim 7, Garcia discloses a digital data system comprising a link that carries message packets, a first node sending a plurality of message packets to a second node on the link, with each message packet comprising an error code (CRC); the second node (i) inspecting the error code for each packet received on the link to detect a packet error; and (ii) returning a control symbol to the first node for each packet received on the link, the control symbol indicating a the packet error (see figures 4 & 8; col. 2, lines 15-24; col. 7, lines 30-32); and the first node responding to the control symbol to control the further transmission of message packets to the second node over the link (see col. 2, lines 15-24). Garcia does not specifically disclose the error code is included in the initial portion (header portion) of the packet and the second node returning the control symbol to the first node before the entire message packet has

arrived at the second node. However, to include error code in the header and/or tail of a packet is well known in the art and is a matter of choice. Saunders discloses error codes (CRC) are included in the front and back of the packet (see figure 10) and Parkerson discloses the second node returning the control symbol (answer packet) to the first node before the entire message packet has arrived at the second node (see col. 10, lines 45-50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the error code in the initial portion as taught by Saunders and returning the control symbol to the first node before the entire message packet has arrived at the second node as taught by Parkerson in the system of Garcia in order to enable the data integrity of the packet to be checked at the end node and to reduce the delay in sending the control symbol to the first node.

Regarding claim 8, Garcia discloses the control symbol specifies identity of a received packet having an error condition (see col. 2, lines 15-24; col. 7, lines 19-32; col. 6, lines 11-26; col. 7, lines 19-32).

Regarding claim 9, Garcia does not specifically disclose the control symbol identify the type of error. However, Saunders discloses identifying the type of packet error (see figure 11 in which different type of errors are identified). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to identify the type of error as taught by Saunders in the system of Garcia in order to effectively identify and correct the error.

Regarding claim 10, Garcia discloses the first node transmits a message packet comprising a header portion and a data portion, at least said data portion including an error code (CRC), and wherein the second node applies said error code to detect the packet error (see col. 5, lines 31-40).

Regarding claim 11, Garcia discloses the first node transmits a message packet comprising a header portion followed by a data portion, and the second node inspects at least a portion (sequence number) of the header portion to detect a first error condition, passing a symbol over the link to the first node to initiate retransmission when it detects the first error condition (see col. 7, lines 19-32).

Regarding claim 13, Garcia discloses a digital data system comprising a link that carries message packets, a first node sending a plurality of message packets to a second node on the link, the second node returning a control symbol to the first node for each packet received on the link, the control symbol indicating a packet error, and the first node responding to the control symbol to control the further transmission of message packets to the second node over the link wherein the first node is configured to transmit message packets of a first size (header) including an initial number of bytes, and of a second size (payload) including a further number of bytes (see figures 4 & 8; col. 2, lines 15-24; col. 7, lines 30-32). Garcia does not specifically disclose the second node applies a first error code to the initial number of bytes whereby corruption of an initial portion of a packet is detected without reference to a subsequent portion of the packet wherein when a further number of bytes appear in the message packet, the second node applies a second error code to the further number of bytes. However, Saunders discloses the second node applies a first error code to the initial number of bytes (front) and a second error code to the further number of bytes (back) (see figure 10) and Parkerson discloses corruption of an initial portion of a packet is detected without reference to a subsequent portion of the packet (see abstract and col. 10, lines 45-52 where Parkerson discloses error is detected and a control symbol (answer packet) is sent to the first node upon receipt of some but not all of the packet).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the first error code and the second error code as taught by Saunders and detecting the corruption without reference to a subsequent portion of the packet as taught by Parkerson in the system of Garcia in order to enable the data integrity of the packet to be checked at the second node and to reduce the delay in sending the control symbol to the first node.

Regarding claims 14-15 and 17, claims 14-15 and 17 include substantially the same limitations as claim 1 and further including sending a valid message packet to a further node over a further link. Garcia discloses this limitation (see fig. 5 where nodes A-R are end nodes and R1-R5 are further nodes. Valid message packets send from one end node will go through at least one further node to another end node).

#### *Response to Arguments*

5. Applicant's arguments with respect to claims 1, 4-11, and 13-17 have been considered but are moot in view of the new ground(s) of rejection. Note that the applicant argued that *Garcia does not teach the second node returning the control symbol to the first node before the entire message packet has arrived at the second node. Unlike the claimed invention, where the error code of the initial portion of the message packet can be inspected and a control symbol based on that inspection be returned to the sending node without the receiving node having the entire packet, the receiving node in Garcia gets the entire message packet and then determines if an error has occurred. There is no teaching in Garcia to suggest that only a portion of the message packet is needed to determine if an error has occurred.* The examiner agrees Garcia does not teach "the second node returning the control symbol to the first node before the entire message

packet has arrived at the second node". However, Parkerson teaches this limitation as described in previous paragraph.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

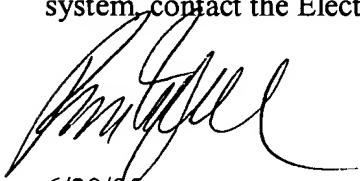
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



6/20/05

**BRIAN NGUYEN  
PRIMARY EXAMINER**